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ABSTRACT

In the period since the passage of the 1964 Civil Rights Act Blacks have continued to experience severe disadvantages relative to Whites in such areas as family stability, unemployment rates, average income, poverty rates, and dependence on government transfer payment programs. From the diverse statistical indicators of relative status two sharply conflicting interpretations have emerged. One stresses relative improvements and convergence towards a position of parity with Whites. The second stresses the lack of overall progress. This paper reviews national data that summarize recent trends in the labor market performance of Blacks and Hispanic Americans. The following three economic indicators are examined: (1) relative earnings; (2) unemployment rates; and (3) labor force participation rates. Using data from the Current Population Survey, Black unemployment rates are analyzed in five large metropolitan areas. This analysis explores the effects of regional unemployment developments and tests for upward trend in the Black unemployment rate relative to the rate for Whites. National and regional data on employment trends since 1948 are examined. The following major theories that purport to explain the disparities in the labor market performance of Blacks and Whites are discussed: (1) supply theories; (2) demand theories; and (3) spatial mismatch theories. Areas for future research are identified. Data are presented in 10 tables and figures. A list of references is included. (BJV)

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THE ECONOMIC PERFORMANCE OF MINORITIES IN NATIONAL AND URBAN LABOR MARKETS

Wayne Vroman

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THE ECONOMIC PERFORMANCE OF MINORITIES IN NATIONAL AND URBAN LABOR MARKETS

Wayne Vroman

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INTRODUCTION

In the period since the passage of the 1964 Civil Rights Act the relative position of blacks in U.S. society has changed in several ways. Indicators of mortality, educational attainment, occupational status and family income all show large gains for blacks relative to whites. At the same time, however, blacks continue to experience severe disadvantages vis-a-vis whites in such areas as family stability, unemployment rates, average income, poverty rates (particularly among children) and dependence on government transfer payment programs. From the diverse statistical indicators of relative status two sharply conflicting interpretations of black experiences since 1964 have emerged. One stresses relative improvements and convergence towards a position of parity with whites. The second stresses the lack of overall progress. A variant on the second point of view emphasizes a growing polarization within the black community; some making it in an increasingly demanding technological society while others who fail to make it remain mired in dead end jobs, the underground economy and/or a position of dependence on government transfer payments. Persons in this latter situation are frequently characterized as members of an underclass whose geographic locus is disproportionably concentrated in the inner city areas of older large metropolitan areas.

This paper has five objectives. First, it reviews national data which summarize recent trends in the labor market performance of black Americans and Hispanic Americans. Three economic indicators are examined: relative earnings, unemployment rates and labor force participation rates. Because the available data are much more extensive for blacks than for Hispanics most of the discussion focuses on blacks. Second, it analyzes

black unemployment rates in five large metropolitan areas using data from the Current Population Survey (CPS). This analysis explores the effects of regional unemployment developments and tests for an upward trend in the black unemployment rate relative to the rate for whites. Third, it examines national and regional data on employment trends since 1948. Fourth, the paper discusses the major theories that purport to explain the disparities in the labor market performance of blacks vis-a-vis whites. Finally, some areas for future research are identified.

A comment about the scope of the minority groups to be examined in the paper is probably appropriate. My own previous research and the availability of time series data have influenced me to restrict the focus of the paper primarily to the labor market experiences of blacks. Hispanic labor market indicators are also discussed briefly in Section I, but American Indians and Asians are not given any explicit attention. Also, because racial data from earlier years frequently combine blacks with other nonwhites, data for nonwhites are often used in Sections I and II of the paper. The distinction between blacks and other nonwhites has become increasingly important in recent years as the black share of the nonwhite population has declined from roughly 90 percent in the early 1970s to 80 percent at present. If data for blacks had been available for all years, such data would have been used.

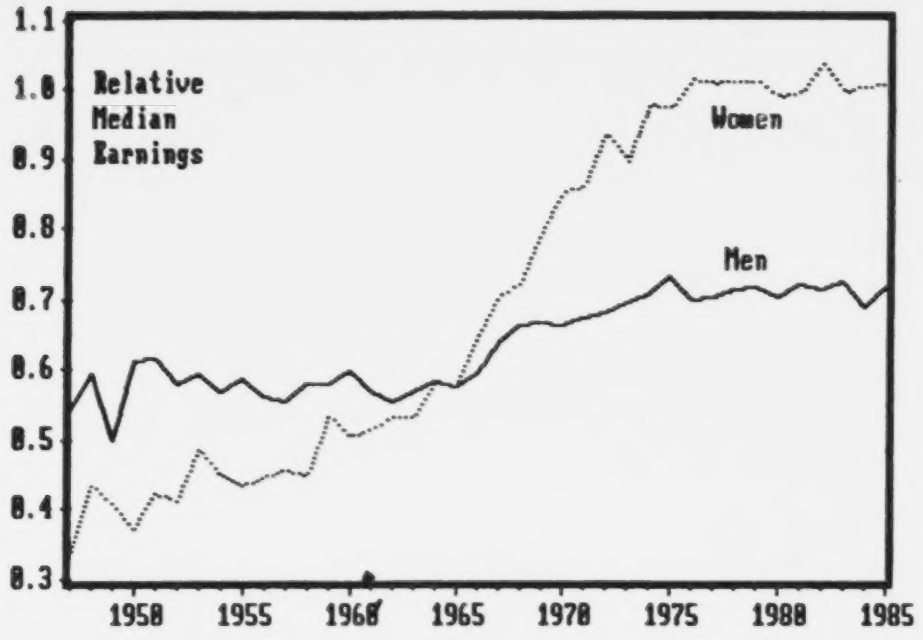
I. TRENDS IN INDICATORS OF LABOR MARKET PERFORMANCE

Three indicators of the relative labor market performance of black Americans are provided by their average earnings, unemployment rates and labor force participation rates when compared to the same measures for whites. Each of the three gives clear evidence of labor market disadvantage, but, because the three do not convey the same information, each one deserves individual attention.

Annual measures of relative earnings by race are available from the Current Population Survey (CPS) from the late 1940s. Figure A provides a clear graphical summary of nonwhite-to-white median annual earnings ratios for the years 1947 through 1985. The underlying medians refer to persons employed as wage and salary workers in March of the following year. CPS data for wage and salary workers which distinguish blacks from other nonwhites (mostly Asians) are available starting in 1975. It should also be pointed out that the earnings ratios for women refer to the ratio for nonwhite women relative to white women.

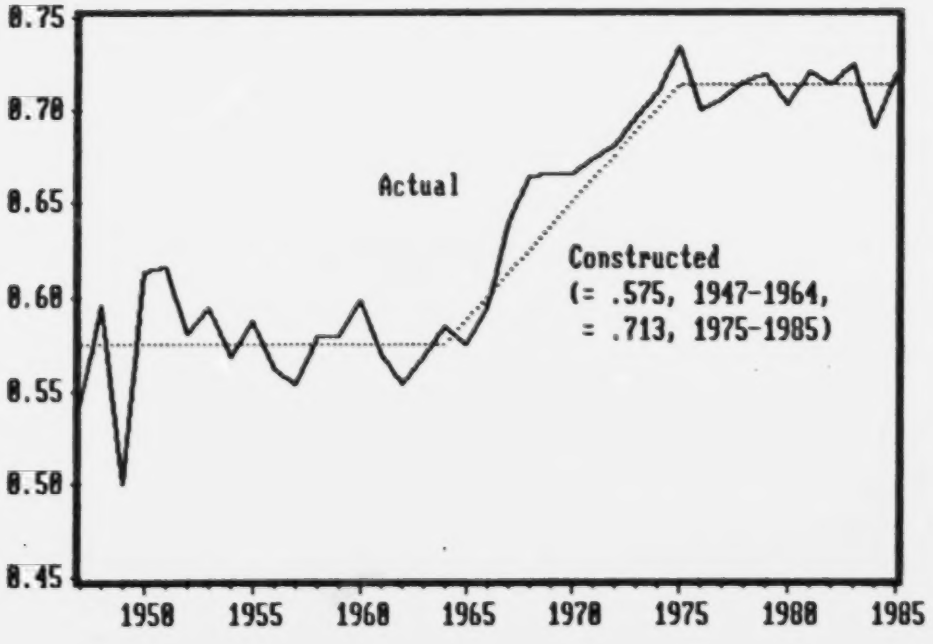
Three aspects of Figure A are noteworthy. (1) The gains in relative earnings are much larger for nonwhite women than for nonwhite men. Female relative earnings started from a lower position just after World War II (ratios below .4) but have been consistently much higher in recent years (averaging roughly 1.0). In contrast, nonwhite men's relative earnings averaged about .6 in the early years covered by Figure A and about .7 in recent years. The extent of the gain for nonwhite men is overshadowed by the gains among women. (2) For both women and men the time period from the mid 1960s to the mid 1970s saw especially large gains in nonwhite

Figure A. Relative Earnings of Nonwhite Men and Women: 1947-1985



Source: US Bureau of the Census, March Current Population Survey

Figure B. Relative Earnings of Nonwhite Men: 1947 1985



Source: Based on data from the CPS

relative earnings. (3) Since the mid 1970s there have been hardly any relative earnings gains for nonwhites of either sex. Nonwhite female earnings have remained essentially on par with white female earnings while the male ratio has remained close to .7.

Two other displays reemphasize the point that gains in relative earnings were especially pronounced in the years between between the mid 1960s and the mid 1970s. Figure B traces actual and "constructed" male relative earnings ratios for the 1947-1985 period. The horizontal lines (one for the years before 1965 and one for the years after 1974) are the respective average earnings ratios for these two sub-periods. The sloping line connecting the two is a linear interpolation for the 1965-1975 period. From Figure B it can be argued that since World War II nonwhite men made gains in relative earnings only during the period from the mid 1960s to mid 1970s.

Table 1 presents four relative earnings ratio series for men (those of Figure A and three other which show black-white ratios) with each series divided into pre 1965, 1965 to 1974 and post 1974 periods. From the annual average rates of change shown in the bottom lines of each panel it is obvious that the three stylized facts discussed previously also hold up when other data series are examined. Perhaps the most important "fact" to emphasize in these relative earnings comparisons is the absence of significant improvement since the mid 1970s.

Data on overall unemployment rates by race extend back to 1948 for white and nonwhite workers but only to 1972 for black workers. Figure C presents ratios of minority to white unemployment rates through 1986. The nonwhite - white ratio trended upward from 1948 to 1955, but has been

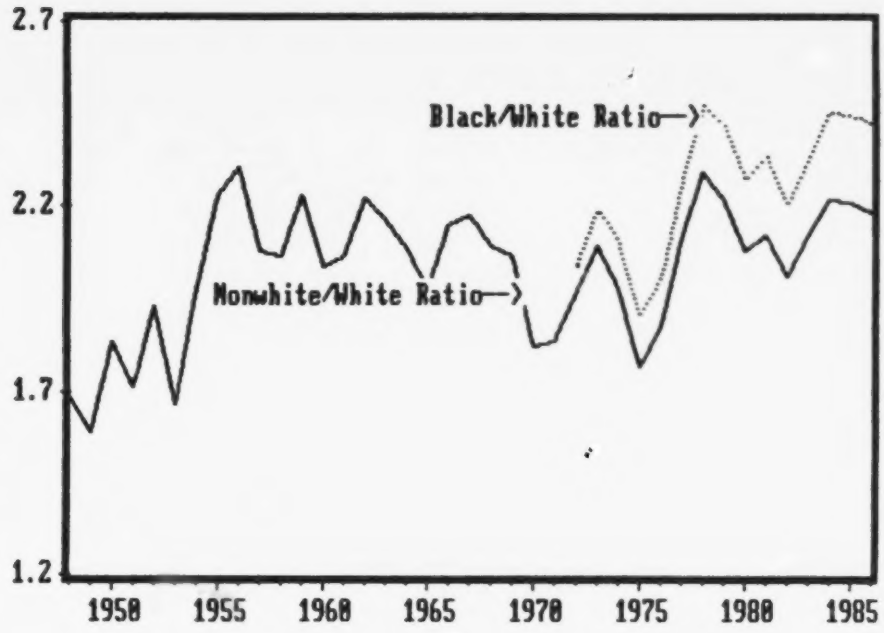
Table 1. Changes in Black Men's Relative Earnings for Selected Periods: 1948 to 1985

TIME PERIOD AND CHANGE IN RELATIVE EARNINGS	Data Source: CPS: Wage and Salary Workers 15 and Older		CPS: All Workers with Earnings 15 and Older		SSA: All Workers with Earnings 16-64		SSA: All Workers with Earnings 15 and Older	
	Year	NW/W Ratio	Year	B/W Ratio	Year	B/W Ratio	Year	B/W Ratio
1948 to 1964								
First Year	1948	.596	a		1957[b]	.531	a	
Last Year	1964	.585	a		1964	.528	a	
Total Change in the B/W Ratio		-.011				-.003		
Average Annual Change in the B/W Ratio		-.001				-.000		
1964 to 1974								
First Year	1964	.585	1967[b]	.580	1964	.528	a	
Last Year	1974	.709	1974	.651	1972[c]	.615	a	
Total Change in the B/W Ratio		.124		.071		.087		
Average Annual Change in the B/W Ratio		.012		.010		.011		
1974 to 1985								
First Year	1974	.709	1974	.651	a		1974	.616
Last Year	1985	.719	1985	.663	a		1984[c]	.613
Total Change in the B/W Ratio		.010		.012				-.003
Average Annual Change in the B/W Ratio		.001		.001				-.000

Source: CPS - The Current Population Survey; SSA - Tabulations of The Social Security Administration's 1 Percent Continuous Work History Sample. All data refer to the median relative earnings of black men except the CPS data for wage and salary workers which refer to nonwhite men.

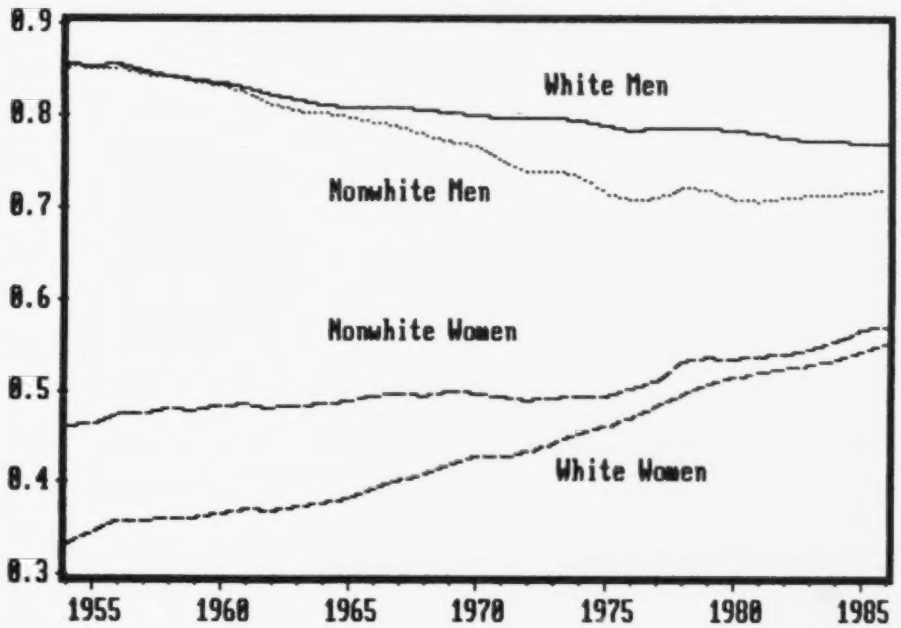
a - Data not available
b - First year of data availability
c - Last year of data availability

Figure C. Ratios of Minority to White Unemployment Rates: 1948-1986



Source: US Department of Labor, Monthly Household Survey

Figure D. Labor Force Participation Rates by Race and Sex: 1954-1986



Source: US Department of Labor, Monthly Household Survey

essentially trendless since 1955 (perhaps showing a small downtrend from 1955 to the late 1960s and a small uptrend after the late 1960s). From 1972 to the present the black-white ratio has been consistently higher than the nonwhite-white ratio. The respective averages of the nonwhite-white and black-white ratios over the 1980-1986 period have been 2.13 and 2.35. Overall, relative unemployment ratios have not improved in the post-World War II period, and for black workers the relative unemployment rate ratio has averaged more than 2.3 in recent years.

The disadvantaged labor market position of black workers is also reflected in data on labor force participation rates (the number of persons working or seeking work as a percentage of population aged 16 and older). Persistently higher relative unemployment and lower relative earnings have contributed to a faster downtrend in black male participation over the past thirty years when compared to white male rates. Figure D shows trends in nonwhite and white participation rates since 1954. For men of both races participation rates have trended downward, but the nonwhite participation rate declined by larger percentages, particularly between the late 1950s and the mid 1970s. Among women of both races, participation rates have increased, but the upward trend has been larger for white women.

When racial data on unemployment rates and labor force participation rates are disaggregated by age it becomes obvious that the sharpest contrasts by race involve young workers. Among men, for example, labor force participation rates have been trending downward within nearly all age groups and for men of both races the very large downtrends were observed among retired persons and those approaching retirement age. Among teenagers and persons aged 20-24, however, nonwhite male participation

rates have declined by 10 to 20 percentage points while white male rates have been essentially trendless (Vroman (1986)). Occurrences of high unemployment rates and low labor force participation rates among young blacks are particularly prevalent in many large metropolitan areas. A dramatic illustration of these racial differences among teenagers is provided by 1986 CPS data from Chicago. While the labor force participation rate and unemployment rate for white teenagers were respectively 61.9 percent and 12.2 percent the corresponding estimates for black teenagers were 38.9 percent and 59.3 percent, i.e. a 23.0 percentage point differential in the participation rate and a 47.1 percentage point differential in the unemployment rate.

From all three aggregate indicators of labor market performance reviewed here (relative earnings, unemployment rates and labor force participation rates) it is obvious that major disparities in outcomes by race are continuing and persistent features of our economy. Perhaps more disturbing than the fact of these various disparities in labor market indicators is the absence of evidence to suggest a lessening of racial disparities since the mid 1970s.

Hispanic Americans are the second largest minority group in the U.S. and a group experiencing rapid population growth. Between 1980 and 1985, the increases in the white, black and Hispanic resident populations were respectively 8.1 million (to 202.8 million), 2.2 million (to 28.9 million) and 2.3 million (to 16.9 million). Thus, in absolute numbers as well as percentages the growth of the Hispanic population has exceeded the growth in the black population during the 1980s.

Table 2 presents summary data on the economic performance of the three population groups between 1973 and 1986. As in the previous discussion the three performance indicators are average annual earnings, unemployment rates and labor force participation rates. Prior to 1973 there is little in the way of annual time series data for Hispanics. Note that median annual earnings data for Hispanics data were first available in 1975.

For nearly all years covered by Table 2 the median earnings of Hispanic men exceeded the black male median. Thus the average Hispanic/white ratio from 1975 to 1984 was .701 whereas the black/white ratio was .653. Among women the average Hispanic/white ratio was .903 between 1975 and 1984 while the black/white ratio averaged 1.021. Men in both minority groups experience much lower average earnings than white men while the average earnings of Hispanic women usually have been about ten percent below the averages for both white women and black women.

In the final years covered by Table 2 it is clear that the average earnings of Hispanic men and women (and of black women) declined relative to the average for whites of the same sex. For both Hispanic men and women the lowest Hispanic/white ratios in the table are observed in 1985 and 1986. The declines in the 1985 and 1986 earnings ratios are statistically significant, i.e. more than could be accounted for by random factors in the CPS earnings data. Examining the cause(s) for the recent reductions in relative earnings is a topic that merits further exploration.

Over the 1973-1986 period unemployment rates for Hispanic workers were always positioned at an intermediate level between the rates for blacks and whites of the same sex. For white, black and Hispanic men, the

TABLE 2

INDICATORS OF MINORITY GROUP ECONOMIC PERFORMANCE: 1973 TO 1986

	Median Annual Earnings					Unemployment Rate (%)			Labor Force Participation Rate (%)		
Year	White	Black	Hispanic	B/W Ratio	H/W Ratio	White	Black	Hispanic	White	Black	Hispanic
	MEN										
1973	9013	5751	NA	.638	NA	3.8	8.0	6.7	79.4	73.4	81.5
1974	9401	6102	NA	.649	NA	4.4	9.8	7.3	79.4	72.9	81.7
1975	10008	6642	7009	.664	.700	7.2	14.8	11.4	78.7	70.9	80.7
1976	10631	7052	7538	.663	.709	6.4	13.7	10.8	78.4	70.0	79.6
1977	11463	7395	8261	.645	.721	5.5	13.3	9.0	78.5	70.6	80.9
1978	12486	7860	8891	.630	.712	4.6	11.8	7.7	78.6	71.5	81.1
1979	13627	9087	9864	.667	.724	4.5	11.4	7.0	78.6	71.3	81.3
1980	14738	9674	10269	.656	.697	6.1	14.5	9.7	78.2	70.3	81.6
1981	15612	10537	10805	.675	.692	6.5	15.7	10.2	77.9	70.0	80.8
1982	15949	10508	10847	.659	.680	8.8	20.1	13.6	77.4	70.1	80.1
1983	16670	10697	11775	.642	.706	8.8	20.3	13.5	77.1	70.6	80.8
1984	17839	11229	11857	.629	.665	6.4	16.4	10.4	77.1	70.8	80.5
1985	18767	12447	12035	.663	.641	6.1	15.3	10.2	77.1	70.8	80.3
1986	19774	12302	11958	.622	.605	6.0	14.8	10.5	76.9	71.2	81.0
	WOMEN										
1973	3269	3015	NA	.922	NA	5.3	11.1	9.0	44.1	49.3	41.0
1974	3628	3352	NA	.924	NA	6.1	11.3	9.4	45.2	49.0	42.4
1975	3908	3831	3479	.980	.890	8.6	14.8	13.5	45.9	48.8	43.2
1976	4225	4542	3802	1.075	.900	7.9	14.3	12.7	46.9	49.8	44.3
1977	4611	4830	4113	1.047	.892	7.3	14.9	11.9	48.0	50.8	44.3
1978	5189	5345	4704	1.030	.907	6.2	13.8	11.3	49.4	53.1	46.6
1979	5983	5962	5536	.996	.925	5.9	13.3	10.3	50.5	53.1	47.4
1980	6615	6589	5772	.996	.873	6.5	14.0	10.7	51.2	53.1	47.8
1981	7174	7290	6677	1.016	.931	6.9	15.6	10.8	51.9	53.5	48.5
1982	7639	7801	7086	1.021	.928	8.3	17.6	14.1	52.4	53.7	48.6
1983	8198	8314	7287	1.014	.889	7.9	18.6	13.8	52.7	54.2	48.5
1984	8601	8877	7669	1.032	.892	6.5	15.4	11.0	53.3	55.2	49.9
1985	9321	9193	7919	.986	.850	6.4	14.9	11.0	54.1	56.5	49.3
1986	10032	9432	8258	.940	.823	6.1	14.2	10.8	55.0	56.9	50.1

Source: Data on median earnings are from the Current Population Survey. Unemployment rates and labor force participation rates are annual averages that appear in January issues of Employment and Earnings, published by the U.S. Department of Labor.

NA - Data not available.

1973-1986 unemployment rate averages were respectively 6.1, 14.3 and 9.9 percent. Thus, while black/white ratio averaged 2.35, the Hispanic/white ratio averaged 1.62. The corresponding average unemployment rates for the three female groups were 6.8, 14.6 and 11.4 percent respectively. Although Hispanics experience much higher unemployment rates than whites, they have had consistently lower unemployment rates than blacks.

When male labor force participation rates are compared it is clear that Hispanic men have the highest average participation rates. Their participation rate exceeded the white male rate in every year between 1973 and 1986. It also appears the Hispanic male participation rate has trended downward less than the rate among white men and black men. This differential may be partly due to the younger average age of the Hispanic population which results in fewer participating in early retirement relative to the two other male groups.

When female participation rates are examined it is clear that Hispanic women have the lowest rates. Between 1973 and 1986 participation rates trended upward for all three female groups, but the relative rankings were always the same, i.e. highest for black women, intermediate for white women and lowest for Hispanic women.

Although the data for the three ethnic groups shown in Table 2 are highly aggregative they reveal a number of consistent patterns. Blacks and Hispanics both experience much higher unemployment rates than whites of the same sex. Men in the minority groups have much lower average earnings than white men. These labor market indicators signal substantial disadvantages for both minority groups relative to the position of whites.

The data in Table 2 also revel that the size of the economic disadvantages are not constant across the two minority groups. In most years the average earnings of Hispanic men have exceeded the average for black men while Hispanic women have had lower average earnings than black women. On average, the unemployment rates of Hispanics are found to be about halfway between the unemployment rates for blacks and whites. Blacks have clearly experienced much higher unemployment than Hispanics in any given recent year.

For most of the minority-white comparisons that can be made in Table 2, the choice of year is not crucial for determining the patterns which are observed. Between 1973 and 1986 most of the economic indicators for minorities vis-a-vis whites were quite stable. The major, and disturbing, exception was the decline in relative earnings for Hispanic men, Hispanic women and black women which occurred in 1985 and 1986. The two year (1984 to 1986) declines in these minority white average earnings ratios were large (eight to nine percent of the 1984 ratios for all three groups) and could indicate some recent adverse developments in the economy for these groups. The underlying cause(s) for the declining relative earnings ratios should be examined

II. BLACK UNEMPLOYMENT IN SELECTED METROPOLITAN AREAS

Following decades of migration from the rural South, most blacks now reside in urban areas of the United States. Outside of the South, blacks who resided outside of the metropolitan areas represented less than 3 percent of the total black population in 1980. Even within the South, only 33 percent of blacks resided in non-metropolitan areas in 1980. Given their predominantly urban residential location the performance of blacks in urban labor markets is central to understanding their overall labor market performance in the U.S. economy.

Since 1967 the U.S. Department of Labor has published CPS - based data showing unemployment rates for regions, states and certain major metropolitan areas. Initially, the CPS data for urban areas were restricted to 20 metropolitan areas, but the number was expanded to 30 in 1973. Illustrative of the concentration of blacks in urban areas is the fact that half of all blacks aged 16 and older resided in these 30 large metropolitan areas in 1986 compared to just 35 percent of similarly aged whites. Using the CPS data one can make comparisons by race, describe trends and analyze unemployment rates in large urban areas. This section will undertake a time series analysis of unemployment rates in five metropolitan areas: Atlanta, Baltimore, Chicago, Indianapolis and Los Angeles. Although all five are large metropolitan areas (among the top 30 in population as of 1970), they are of much different sizes (ranging from .91 million persons aged 16 and older in Indianapolis to 6.22 millions in Los Angeles in 1986) and have a wide geographic dispersion. Because the published racial-ethnic detail in the CPS data for urban areas was

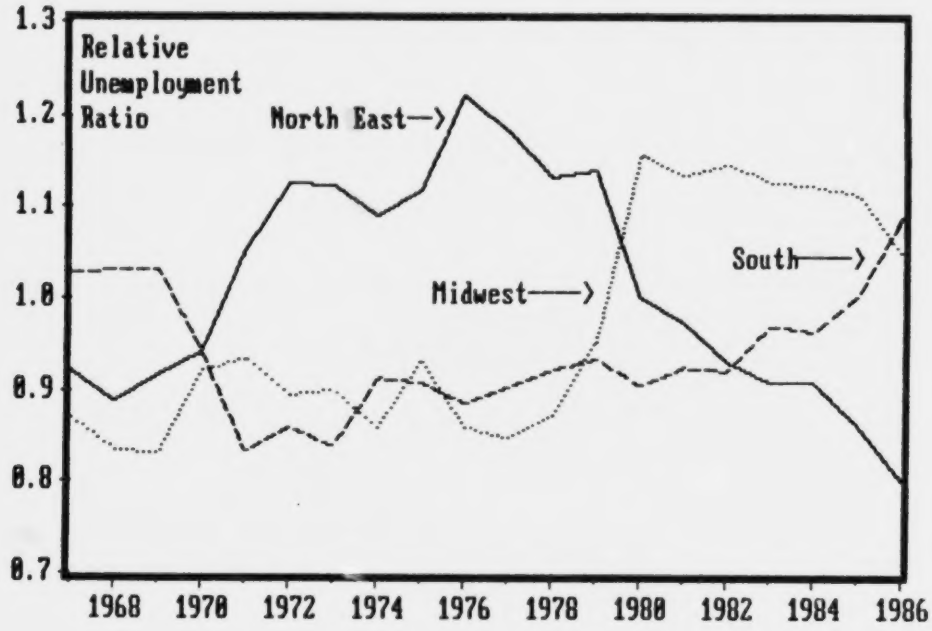
restricted to nonwhites and whites prior to 1981 (data for blacks and Hispanics have been included since 1981) the analysis by race will focus primarily on white-nonwhite comparisons.

Although Metropolitan Statistical Areas (or MSAs) are commonly thought of as reasonable approximations for defining labor market areas, their unemployment rates (and other indicators of labor market outcomes) are influenced by regional as well as economy-wide developments. Considerations of transportation costs, scale economies in production, natural resource endowments and climatic similarities make it likely that urban areas will develop close economic relationships with other nearby areas rather than more distant areas. With CPS data one can examine the linkage of specific urban labor markets with wider regional labor market developments.

The CPS data are also useful for showing how closely regional labor market developments coincide with national trends. Regional unemployment rates can be traced for the four Census Bureau Regions (North East, Midwest, West and South) and the nine divisions (New England, Mid-Atlantic, East North Central, West North Central, Mountain, Pacific, South Atlantic, East South Central and West South Central) from 1967 to the present.

Figure E displays relative unemployment rates (regional rates divided by the national rate) for the three regions (all but the West) which contain most of the black population. This figure vividly illustrates two facets of regional unemployment behavior: serial correlation in deviations about the national rate and systematic trendwise changes vis-a-vis the national rate. The serial correlation feature means that the relative unemployment rate of one year is similar to the rate for the previous year

Figure E. Ratios of Regional to National Unemployment Rates: 1967-1986



Source: US Department of Labor, Monthly Household Survey

(and for the following year). For example, there are 20 data points in the Figure E for the years 1968 to 1986 where a relative unemployment rate exceeds 1.0 (10 from the North East, 7 from the Midwest and 3 from the South). For 17 of the 20 the relative rate for the previous year also exceeds 1.0 (whereas only 10 would be expected to exceed 1.0 if regional unemployment rates fluctuated about the national rate in a random manner).

Several trends are obvious in Figure E: the deterioration in the North East between 1967 and 1976 followed by improvements between 1976 and 1986; rapids gains in the South between 1969 and 1971; deterioration in the South after 1982 and the rapid deterioration in the Midwest between 1978 and 1980. Unemployment rates in the regional economies have moved about the national rate in a systematic (not a random) manner over the 1967-1986 period, and deviations of regional rates from the national rate have often been of substantial size. Even larger deviations are observed in the relative unemployment rates for the nine Census divisions.

Since regional unemployment rates are observed to vary about the national rate, the question arises: what is the cause (or causes) for these deviations? This important question will not be pursued in this paper. Rather, we shall next explore the relationship between regional unemployment and unemployment in the metropolitan areas using data from the five MSAs previously selected for analysis.

To test for the importance of regional developments on MSA unemployment rates, two regressions were fitted for each urban area; one using the national unemployment rate and one using the appropriate regional unemployment rate. In this analysis the regional rates used were the rates for the census division in which the MSA is located. (A partial exception

to this statement is provided by the analysis of Baltimore which is located on the northern edge of the South Atlantic division. Here the regional rate used was an average of the rates for the Mid Atlantic and South Atlantic divisions.) The test for the importance of region is to note the improvement in the goodness of fit when the regional rate replaces the national rate in the regression equation.

Table 3 presents the results of this regression analysis. All equations explain the MSA unemployment rate using a time trend as well as an aggregative unemployment rate. In the first five equations the national unemployment rate has been used. The R^2s for these equations range from .72 to .92. All unemployment variables are highly significant (with t ratios ranging from 4.1 to 8.3) as are three of the five trend variables (tested at the .05 level with a 2 sided t test). Each of the five MSA unemployment rates are significantly correlated with the national rate with three of the MSA unemployment rates also showing significant trendwise departures from the national rate.

Use of unemployment rates from Census divisions improves the fit of the equations for all five metropolitan areas. Unexplained error variances are reduced substantially in all equations, by about one third in Atlanta, Baltimore and Indianapolis and by more than two-thirds in Chicago and Los Angeles. Note also that the trends are of much smaller size in the last five equations, i.e. in the first five equations the trends were picking up some of the effects of divisional unemployment which is explicitly included in the last five equations.

The main conclusion from the Table 3 regressions is that regional unemployment is more important than national unemployment for explaining

TABLE 3

REGRESSIONS TO EXPLAIN UNEMPLOYMENT RATES IN FIVE METROPOLITAN AREAS

Metropolitan Areas	Independent Variables				Summary Statistics		
	Constant	U.S. Unemployment Rate	Divisional Unemployment Rate	Trend	$\bar{R}^2$	Std. Error	D.W.
Atlanta, 1973-1986	1.95 (1.7)	.96 (5.6)		-.24 (4.2)	.72	.77	.94
Baltimore, 1967-1986	.04 (.0)	1.01 (5.2)		-.03 (.6)	.74	.96	.95
Chicago, 1967-1986	-1.29 (1.9)	.91 (6.2)		.18 (4.0)	.92	.73	.79
Indianapolis, 1973-1986	.39 (11.1)	.69 (4.1)		.12 (2.0)	.72	.75	1.19
Los Angeles, 1967-1986	1.89 (3.0)	1.12 (8.3)		-.17 (4.2)	.80	.68	.80
Atlanta, 1973-1986	1.66 (1.8)		.96 (7.3)	-.17 (4.0)	.81	.62	1.16
Baltimore, 1967-1986	.19 (.3)		.95 (7.0)	.00 (.0)	.83	.79	1.24
Chicago, 1967-1986	.02 (.1)		.75 (12.8)	.11 (4.0)	.98	.40	1.67
Indianapolis, 1973-1986	2.34 (3.6)		.51 (5.5)	.03 (.6)	.81	.62	1.55
Los Angeles, 1967-1986	-.66 (1.5)		1.17 (17.3)	-.05 (3.2)	.95	.35	1.49

Source: Metropolitan area unemployment rates are from the CPS. In parentheses beneath each coefficient is the t ratio for the variable. Summary statistics are the $\bar{R}^2$ (the R^2 adjusted for degrees of freedom), the standard error of estimate and the Durbin-Watson statistic.

time series changes in MSA unemployment rates. (It would be important to perform further analysis to see if this finding is robust when tested for more urban areas and when equations are fitted which include controls for possible simultaneous equation bias). These preliminary results strongly suggest that urban labor markets are closely tied to broad geographic economic developments, and that urban labor markets are more closely tied to regional developments than to national developments.

Having examined the link between regional and metropolitan area unemployment rates, the next step is to analyze the determinants of black unemployment rates within metropolitan areas. One purpose of this analysis is to examine the association between black and white unemployment rates within MSAs. Unemployment rates by race have been assembled for the five MSAs examined in Table 3. As noted previously, the published CPS data for urban areas show unemployment rates for nonwhites before 1981 and for blacks as well as nonwhites after 1981. In four of the five MSAs blacks make up the vast majority of the nonwhite population (from 86 to 96 percent) so that the distinction between the two racial designations is of little quantitative importance. In Los Angeles, however, the nonwhite population has nearly as many Asians as blacks, and Asians have unemployment rates similar to the rates for whites. The analysis for the Los Angeles MSA was performed using the two alternative minority unemployment measures (nonwhite and black) after 1981.

Recall from Figure C of Section I that national unemployment rates for nonwhites are available back to 1948 in annual CPS data. The first four regression equations in Table 4 explore the association between white and minority unemployment rates using national data. Unemployment

relationships at the MSA - level are then explored in the remainder of the table.

Since MSA-level data by race are first available in 1968 it is important to place any post-1968 trends in racial unemployment differentials into the longer term context provided by pre-1968 national data. Thus the first regression in Table 4 explains the national unemployment rate for nonwhites using just the national rate for whites and a single long term trend for the entire 1948-1986 period. The white unemployment rate is highly significant (t ratio of 16.1) and there is also evidence of a small (but significant) upward trend in the nonwhite rate relative to the white rate. This equation with just two explanatory variables accounts for 94 percent of the variation in nonwhite unemployment rates over the 1948-1986 period.

The second regression in Table 4 decomposes the trend variable into three separate sub-periods 1948 to 1955, 1955 to 1967 and 1967 to 1986. Each of the three trend variable is significant. They show a rapid uptrend in nonwhite unemployment between 1948 and 1955 (nearly half a percentage point per year) and then a small downtrend and a small uptrend respectively in the two later periods. This equation fits the data better than the first equation (R^2 of .96 rather than .94) and provides evidence of a significant uptrend in nonwhite unemployment rates since 1967.

The recent, i.e. post 1967, uptrend in the minority unemployment rate is of measurable size; the minority rate is predicted to increase by almost 2 percentage points per decade for a given level of the white unemployment rate. This upward trend is also apparent in equations fitted to national data for the 1968-1986 period (the third and fourth equations of Table 4).

TABLE 4

REGRESSION TO EXPLAIN NONWHITE UNEMPLOYMENT RATES IN FIVE METROPOLITAN AREAS

Total U.S. and Metropolitan Areas	Independent Variables						Summary Statistics		
	Constant	White Unemployment Rate	Black Race Dummy 1981-1986	Trend 1948 - 1955	Trend 1948 - 1986	Trend 1967 - 1986	$\bar{R}^2$	Std. Error	D.W.
Total U.S., 1948-1986	.18	1.80			.05		.94	.79	.70
	(.4)	(16.1)			(3.5)				
Total U.S., 1948-1986	-1.33	1.75		.48	-.09	.17	.96	.64	1.06
	(2.2)	(18.0)		(4.6)	(2.3)	(3.2)			
Total U.S., 1968-1986	1.12	1.50				.19	.98	.48	1.06
	(2.5)	(14.8)				(7.0)			
Total U.S.[a], 1968-1986	1.08	1.53	1.65			.17	.98	.53	1.04
	(2.0)	(13.5)	(3.7)			(4.1)			
Atlanta, 1973-1986	-.18	2.21				.12	.83	1.15	2.50
	(.1)	(7.9)				(1.4)			
Baltimore, 1968-1986	1.34	1.21				.38	.65	2.38	1.39
	(.8)	(3.1)				(3.5)			
Chicago, 1968-1986	-1.07	1.81				.50	.89	2.21	1.26
	(.8)	(5.4)				(3.9)			
Indianapolis, 1973-1986	-1.45	2.24				.19	.42	3.34	1.27
	(.3)	(2.2)				(.7)			
Los Angeles, 1968-1986	3.83	1.14				-.09	.64	1.18	1.55
	(2.9)	(5.8)				(1.7)			
Los Angeles[a], 1968-1986	2.89	1.18	1.54			.02	.75	1.20	2.05
	(1.9)	(5.8)	(1.5)			(.3)			

Source: White and minority unemployment rates are from the CPS. In parentheses beneath each coefficient is the t ratio for the variable. Summary statistics are the $\bar{R}^2$ (the R^2 adjusted for degrees of freedom), the standard error of estimate and the Durbin-Watson statistic.

[a] Data for nonwhite unemployment rates through 1980 and for black unemployment rates from 1981 to 1986.

Note that when black unemployment rates replace nonwhite rates after 1981 (the fourth equation) the race dummy for blacks suggests that blacks have experienced nationwide unemployment rates 1.65 percentage points higher than nonwhite unemployment rates in the 1980s.

There is clear evidence in Table 4 that nonwhite unemployment rates are strongly influenced by white unemployment rates. The white unemployment coefficients are positive, greater than 1.0 and significant in the regressions for all five urban areas. For three of the five urban areas (Atlanta, Chicago and Los Angeles) white unemployment has a t ratio larger than 5.0. In Baltimore and Los Angeles the white unemployment coefficient is much smaller than 2.0. The absence of a two-to-one response of nonwhite unemployment to white unemployment in these two urban areas is somewhat surprising. This finding could be related to measurement error in CPS-based estimates of nonwhite unemployment. Substitution of black for nonwhite unemployment rates in Los Angeles (the final equation of Table 3) causes only a small increase in the coefficient for white unemployment (from 1.14 to 1.18).

For each urban area the regressions also test for a trend in the nonwhite unemployment rate relative to the white rate. In Baltimore and Chicago there is evidence of a significant upward trend but not in the other three MSAs. Observe that the upward trends in Baltimore and Chicago are large; .38 and .50 percentage points per year respectively. In Chicago nonwhite unemployment rates averaged more than 20 percent during the 1981-1986 period.

To summarize this analysis of urban area and nonwhite unemployment rates in five MSAs over the 1967-1986 period, four statements can be made.

(1) The unemployment rate in each of the five MSAs was found to be much more closely associated with the unemployment rate of its geographic division than with the national unemployment rate. (2) Changes in nonwhite unemployment rates were closely associated with changes in white unemployment rates in these MSAs. (3) None of the five MSAs provided evidence of an improvement in nonwhite unemployment rates between the late 1960s and 1986. In Baltimore and Chicago, in fact, there was statistical evidence of an increase in the nonwhite unemployment rate vis-a-vis the white rate. (4) This has been a preliminary analysis of urban area unemployment experiences of nonwhites using CPS data. A more thorough analysis is needed to explain why nonwhite unemployment experiences vary across MSAs.

III. REGIONAL EMPLOYMENT TRENDS

Although the aggregate black/white annual earnings ratio has been quite stable since the mid 1970s, black/white earnings ratios exhibit substantial variability across subgroups in the population. Two aspects of subgroup variation to be noted here are geographic and industrial variation. This discussion will focus primarily on the relative earnings of black men.

Across the four major geographic regions of the U.S. in any recent year, black men's relative earnings are found to be the highest in the Midwest, second highest in the West, third highest in the North East and lowest in the South. A tabulation of annual black/white earnings ratios in 1983 using data from the Social Security Administration, for example, showed the four ratios to be .785, .772, .723 and .639 respectively. Because relative earnings are so much lower in the South than in the other three regions, it is useful to group workers by geographic area into the South and the Nonsouth.

Table 5 presents summary data by race showing average annual male earnings by broad region (Nonsouth, South and U.S.) for twelve major industries. Besides showing the means for men of both races the table also shows relative earnings and black male worker counts by industry and region. Certain industries are consistently either high-wage or low-wage industries for men of both races. Average annual earnings are low in agriculture, retail trade and other services while earnings are high in mining, durable manufacturing, nondurable manufacturing and transportation. Note that back men's relative earnings (i.e., black/white ratios) are also

Table 5. Male Earnings by Race, Industry and Region: 1983

Industry	Nonsouth	South	U.S.	Nonsouth	South	U.S.
	Mean Earnings of Black Men			Relative Earnings in 1980		
Ag	4563	4361	4392	0.649	0.610	0.622
Mining	20349	15819	17205	0.917	0.773	0.809
Const	11711	7827	9030	0.724	0.596	0.603
Dur Mfg	18222	12720	16097	0.860	0.695	0.782
NDur Mfg	15742	14460	15029	0.811	0.736	0.771
Trans	19459	15952	17754	0.885	0.756	0.821
W Trade	13407	10471	11905	0.739	0.626	0.670
R Trade	6886	6680	6778	0.668	0.655	0.663
Finance	12753	10079	11841	0.658	0.573	0.621
Pro Serv	10114	9431	9738	0.586	0.546	0.567
Oth Serv	7526	6253	6883	0.596	0.516	0.559
Pub Admin	14243	10927	12465	0.832	0.708	0.753
Unknown	12176	8525	10557	0.731	0.582	0.657
Total	12868	9910	11403	0.761	0.629	0.691
	Mean Earnings of White Men			Black Worker Counts		
Ag	7033	7151	7065	234	1309	1543
Mining	22190	20454	21264	93	211	304
Const	16170	13125	14983	1140	2540	3680
Dur Mfg	21180	18295	20590	4457	2804	7261
NDur Mfg	19406	19645	19486	2304	2884	5188
Trans	21981	21088	21680	1917	1728	3650
W Trade	18196	16722	17767	1400	1504	2904
R Trade	10310	10197	10276	2924	3244	6168
Finance	19396	18104	19062	1409	879	2288
Pro Serv	17274	17287	17278	2981	2565	5546
Oth Serv	12628	12115	12480	2919	2168	5087
Pub Admin	17124	15457	16583	1691	1968	3659
Unknown	16651	14494	16067	3214	2561	5775
Total	16916	15529	16510	26683	26370	53053

Source: Social Security Administration

high in the latter set of industries. The respective ratios in these industries are .809, .782, .771 and .821 compared to the overall ratio for the U.S. of .691. Since the level of employment in mining is very low, (less than 1 million), durable manufacturing, nondurable manufacturing and transportation are especially important industries in providing high paying jobs for black men.

Table 5 also shows that black men's relative earnings are lower in the South than in the Nonsouth across all industries. The overall ratios by region, respectively .639 and .761, indicate that black men continue to experience substantially lower earnings in the South than elsewhere. Thus, in 1983, the difference in overall mean earnings (Nonsouth versus South) was $1,387 ($16,916-$15,529) for white men but $2,948 ($12,868-$9,920) for black men. Note also that the position of black men employed in durable manufacturing in the South is much lower than in the Nonsouth (with ratios of .695 and .860 respectively). The general movement jobs from other regions to the South (and in particular the movement of durable manufacturing jobs) could have important (negative) implications for the overall relative earnings of black men.

The private sector industries where black men's relative earnings are high have some important macroeconomic traits. First, their employment is very responsive to cyclical changes in economic activity. This cyclical sensitivity is particularly characteristic of durable manufacturing (Okun (1973)). Second, since World War II their employment has been growing more

slowly than employment in most other industries. Mining, manufacturing and transportation accounted for 53.3 percent of private nonagricultural employment in 1948. By 1986 their share of the private employment total had declined to 30.2 percent. Employment growth has been much more rapid in other industries where black men's relative earnings are lower than average (e.g., professional services where the ratio is .567 versus the overall U.S. average of .691 in Table 5.).

Summary data on employment growth for the 1948-1986 period appear in Table 6. Columns (1) and (2) respectively show total private wage and salary employment and the combined employment of the mining, manufacturing and transportation industries. While total employment more than doubled between 1948 and 1986 (an increase of 43.7 million jobs), employment in the three "high wage" industries grew only modestly (by 4.2 million jobs). Between 1974 and 1986 combined employment in the three "high wage" industries actually declined (by .5 million) while total employment increased by 18.3 million. Column (5) traces the decline in the employment share represented by these three industries. Since 1974 their share of total private employment has declined even more rapidly than in the earlier years. The annual decline in the column (5) employment share averaged .0053 between 1948 and 1974, but .0078 between 1974 and 1986.

The black population is not uniformly distributed across the geographic areas of the U.S. Over half of all blacks reside in the South. Within both the South and the Nonsouth there is also a large amount of variation in black population density. Outside the South the largest black population concentrations are found in the states of the Mid-Atlantic (New York, New Jersey and Pennsylvania) and East North Central (Ohio, Indiana,

TABLE 6

PRIVATE EMPLOYMENT BY INDUSTRY AND CENSUS DIVISION: 1948 to 1986

Year	Private Wage and Salary Employment		Mid Atlantic + East North Central Employment		Mining + Mfg. + Trans. Employment Share (2) ÷ (1) (5)	Mid Atlantic + East North Central Employment Share		(MA + ENC) Mining + Mfg. + Trans. Employment Share (4) ÷ (1) (8)
	All Industries (1)	Mining + Mfg. + Trans. (2)	All Industries (3)	Mining + Mfg. + Trans. (4)		All Industries (3) ÷ (1) (6)	Mining + Mfg. + Trans. (4) ÷ (2) (7)	
1948	38,933	20,753	19,178	11,134	.533	.493	.537	.286
1959	44,920	21,399	20,332	10,481	.476	.452	.490	.233
1964	48,530	21,885	21,189	10,454	.451	.437	.478	.215
1969	57,975	25,304	24,545	11,604	.436	.423	.459	.200
1974	64,374	25,503	25,239	10,917	.396	.392	.428	.170
1979	74,126	27,143	26,969	10,750	.366	.364	.396	.145
1986	82,662	24,980	28,065	8,959	.302	.340	.359	.108
1948-86 Change	43,729	4,227	9,887	-2,175	-.231	-.153	.178	-.178
1974-86 Change	18,288	-523	2,826	-1,958	-.094	-.052	-.069	-.062

Source: All employment data are from the establishment survey conducted by the U.S. Department of Labor. Employment measured in thousands. Aggregation of the data was done at the Urban Institute.

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Illinois, Michigan and Wisconsin) Census divisions. In 1980, for example, of the total black population of 26.5 million, 14.1 million resided in the South. Outside the South 8.9 million of 12.4 million blacks resided in the Mid Atlantic and East North Central divisions. Across these two nonsouthern divisions blacks represented 11.4 percent of the total population whereas across the other four nonsouthern divisions (New England, West North Central, Mountain and Pacific) they constituted only 4.8 percent of the total population (O'Hare, et. al. (1982), Chapter 3).

Three important employment trends in the Mid-Atlantic and East North Central divisions are illustrated in Table 6. First, total employment (as well as total population) has grown much more slowly than the national average. Between 1948 and 1986 these two divisions added 9.9 million private jobs while the nationwide increase was 43.7 million jobs. As a share of total national employment, employment in these divisions declined from .493 in 1948 to .340 in 1986, from roughly one-half to one-third of the national total. Second, employment in mining, manufacturing and transportation (column (4)) has declined absolutely since 1948 with most of the reduction taking place since 1974. There were nearly 2 million fewer jobs in 1986 than in 1974 in these three industries. Third, for both total employment and employment in the three industries, the reduction in the Mid Atlantic and East North Central's share of national employment (columns (6) and (7)) was more rapid after 1974 than in the earlier, 1948-1974 period.

As a final summary measure of the changing location and importance of jobs in the three industries where black men realize high earnings, column (8) shows employment in these industries in the Mid Atlantic and East North

Central divisions as a share of national employment. The proportion declined from .286 in 1948 to .108 in 1986, and the rate of decline was more rapid after 1974 than in earlier years.

The decline in importance of these industries and the dispersal of jobs away from the traditional geographic centers of U.S. heavy industry, have meant a decrease in the availability of high paying jobs in the major black population centers of the Mid Atlantic and East North Central divisions. Illustrative of this change is the ratio of employment in these industries (column (4) of Table 6) to the total black population in the two divisions. Between 1950 and 1980 the total black population of the two divisions increased from 3.7 to 8.9 million. Thus, a crude industrial-jobs-to-black population ratio decreased from 3.03 to 1.20 in these two divisions between 1948 and 1979. In the rest of the U.S. (including the South) a ratio calculated in a similar manner actually increased modestly from .85 to .93 over the same thirty year period. The divergent long run trends in population growth and high-paying-jobs growth may have affected the prospects for economic success of black men.

Many researchers have questioned whether a growing geographic mismatch between the job location and the location of important black population centers may provide a fundamental explanation for the lack of black economic progress. Since the black population resides predominantly in the central cities of major urban areas, especially outside the South, there are several possible causes for a geographic mismatch. The employment trends just summarized are relevant to one dimension of a possible mismatch, namely the movement of jobs in general and of high paying industrial jobs in particular away from states in the Mid Atlantic

and East North Central divisions at the same time that the black population has been moving into these states. These contrasting flows of jobs and people could be termed a long distance migration mismatch. Compared to the situation of thirty and forty years ago there are fewer high paying industrial jobs relative to the size of the black population residing in the major northern industrial states.

Jobs do not have to move to a different geographic division to create a mismatch problem for black workers. Most blacks, particularly those outside of the South, reside in the inner cities of major metropolitan areas. If a company relocates from a central city site to a suburban site of the same metropolitan area or to a greenfield site (where a new plant is erected in a rural field) in the same state or an adjacent state, this too causes a job loss in the central city. The job loss from these moves is similar to the loss associated with a move to a different geographic region or to a foreign site. Proximate causes for an employer's decision to close an old inner city plant can be that it has obsolete capital equipment, an outdated product line and/or high land values and associated high property tax liabilities.

Since large numbers of northern blacks do not live in suburban areas or in rural areas, the suburbanization and greenfielding of jobs effectively increases the average distance from residential location to job location. Although the movement of jobs from central cities to surburbs often is the dimension of the mismatch idea that receives attention, all of the other moves identified above (to greenfields, other regions and other countries) also cause job losses in central cities.

Disparities in rates of employment growth in central cities and suburbs have been documented by several researchers and need not be repeated here. Two papers by Kasarda (1984) (1987) provide recent summaries of the growth differentials in both northern and southern cities. In general, between 1970 and 1984 northern central cities experienced major reductions in total employment while employment in their suburban rings grew modestly. Southern and western cities over the same period generally experienced employment growth in both central city and suburban areas, but the growth was much more rapid in the suburban areas. Thus, the preconditions needed for a central city-suburban mismatch seem to be met by recent employment growth experiences.

To summarize, there are several aspects to the idea of a spatial mismatch between job location and residential location as a determinant of the economic performance of black Americans. This section of the paper has examined mainly the long run trends in employment by industry and employment in major and geographic areas within the U.S. There are also central city-suburban job growth disparities that relate to possible spatial mismatches. Additional discussion of spatial mismatches is reserved for the next section of the paper.

IV. THE LITERATURE

Theories to explain racial disparities in labor market performance abound. This literature, drawn from the disciplines of economics, sociology, history, anthropology and political science, is far too extensive to be easily reduced to a short summary. The purpose of this section is to identify some major threads of the economics literature with an eye towards their testability and macro explanatory power, i.e. do they have testable implications and how well do their predictions square with historical evidence?

Because the black population is so heavily concentrated in larger urban areas (particularly outside of the South) an influential strand of the racial disparities literature has arisen that stresses the adverse effects on blacks of the geographic mismatch between job location and residential location within urban areas. Some comments on this literature will be offered after the more traditional economics literature has first been discussed.

Several distinct economic theories have been advanced to explain black labor market performance and the size of the racial earnings gap. The book written by Becker (1957) is commonly acknowledged as stimulating theoretical work by economists on racial differences in earnings. Following Becker's "taste for discrimination" theory several alternative theories have also been developed. Summaries of the economics literature on racial earnings differences and racial discrimination in employment have been written by Marshall (1974) and Oaxaca (1977). Most recently Cain (1986) has provided a comprehensive literature review.

Supply Theories

Economic explanations for the low earnings of blacks fall into two broad, but not mutually exclusive, categories: demand and supply explanations. Supply explanations typically stress how the process of human capital formation can result in low earnings. Becker (1964) Mincer (1970, 1974), Welch (1973) and Smith and Welch (1979, 1986) are prominent in this literature. Essentially these explanations view low earnings as a result of low human capital formation, including low levels of formal schooling, low quality schooling and low levels of investment in on-the-job training. Since there are no publicly available aggregative data on vocational training or on-the-job training for white and black workers, direct comparisons by race of these human capital stock components cannot be made.

The relationship between schooling and earnings was first explored by Becker (1964). Subsequent empirical applications include the work of Hanoch (1967) and Mincer (1970, 1974). In the so called schooling model micro data on worker earnings are explained by years of schooling and several other arguments such as other personal characteristics, years of work experience and geographic location. The regression coefficient for the schooling variable is interpreted as the economic rate of return to schooling. Within this framework, it is clear that increases in the relative educational attainment of black workers will lead to a reduction in racial earnings differentials. If rates of return by differ, then separate schooling coefficients for blacks and whites should be estimated. Numerous cross-section studies using micro data have confirmed the

importance of schooling as a determinant of worker earnings and racial schooling differences as a determinant of the racial earnings gap [(Mincer (1974), Welch (1973), Smith and Welch (1979, 1986) and U.S. Commission on Civil Rights (1986)].

Black-white differences in both the quantity and quality of schooling have been declining. It is generally found that black children receive lower scores on standardized tests when compared to white students in the same grade. However, work by Welch (1973) and Freeman (1972) demonstrates that the relative quality of black schooling has been rising over the course of the past 70 years (the time period appropriate for studying racial earnings disparities from 1940 to the present). They examined quality indicators such as teacher salaries, average class size, length of school year, absentee rates, and grade retardation rates and found that black-white differentials have declined markedly since the early decades of this century.

Differentials by race in the quantity of schooling have also been declining. This is apparent in the educational attainment data from Decennial Censuses and Current Population Surveys (CPS). Recent papers by Smith (1984) and Smith and Welch (1986) provide detailed documentation of this convergence. Smith and Welch (1986, p. 27) show that mean educational attainment of black men and white men aged 16-64 in 1940 were 4.70 and 9.38 years respectively, whereas the corresponding means in 1980 even 10.96 and 12.47 years respectively. Despite the gains in black men's educational attainment, substantial differences are still observed for men of older ages.

The gains in educational attainment realized by black men have been large and have been occurring at a steady rate over the past forty years. In an analysis based on micro data from five decennial censuses (1940 to 1980) Smith and Welch (1986) examined changes in the real (inflation-adjusted) weekly earnings of black and white men. They concluded that educational improvements and geographic mobility were primarily responsible for closing the male earnings gap. In their data the overall relative earnings ratio for black men increased from .43 in 1940 to .73 in 1980. Their analysis identified four factors -- increases in years of schooling, improvements in the quality of schooling, rural-to-urban migration and South-to-North migration (particularly from 1940 to 1970) -- as making important contributions in closing the earnings gap. In summary, they concluded that supply side changes caused the observed changes in relative earnings between 1940 and 1980. Conversely, the importance of demand side changes (and of affirmative action in particular) was discounted. In their words "slowly evolving historical forces ... that enhance the labor market skills of blacks -- education and migration -- were the primary determinants of long-term black economic improvement" (p. xxi).

While improvements in education and migration certainly matter for individual workers, the year-to-year changes in these variables within the overall black population of working age are very gradual. One implication of the Smith and Welch analysis is that relative earnings gains should have occurred rather continuously over the 1940 to 1980 period. In fact, black men's gains were all concentrated in two sub-periods; during World War II and between the mid 1960s and the mid 1970s. In other years, i.e. from 1945 to 1965 and from 1975 to the present, relative earnings did not

increase. (Recall Figure B from Section I.) This historical record whose timing is clearly observable in annual time series data (but cannot be pinpointed in decennial census data) suggests that sustained periods of strong labor market demand (World War II and the late 1960s) and affirmative action (first actively pursued in the late 1960s) may have played more important roles than suggested by Smith and Welch's analysis.

A second supply-oriented explanation for changes in relative earnings has been offered by Butler and Heckman (1977, 1978). They argue that growth in government transfer payment programs since 1964 has been responsible for an apparent gain in black relative earnings. Their argument emphasizes the high replacement rates that government transfers represent for low-wage workers. Since blacks traditionally earn much less than whites, disproportionate numbers of blacks would be attracted by the availability of transfers and stop working.

The earnings distributions published by the Census Bureau and the Social Security Administration refer to persons with some earnings during the year. As a consequence of transfer-induced labor supply reductions, Butler and Heckman argue that the earnings medians have been increasingly affected by a problem of sample censoring. Transfers induce a labor supply response, remove low-wage workers from the earnings distribution, and artificially inflate the published earnings medians. Because proportionately more blacks are affected, transfers influence the black median to a larger extent and cause the black/white ratio to rise. There might be no increase in the ratio if the zero earners were not removed from the earnings distributions.

This sample censoring (or sample selection) hypothesis and several of its testable implications has been recently examined by Vroman (1987). The findings of that analysis provided little support for the sample censoring hypothesis. Five specific findings were as follows: (1) Since 1955 there have been measurable labor supply reductions for men of both races, but the reductions were much larger for blacks than for whites. (Recall Figure D of Section I.) The largest changes in nonwork status occurred among older men of both races and among younger black men aged 16-19 and 20-24. (2) No unusually large labor supply reductions occurred between the mid-1960s and the mid-1970s, particularly among those most likely to have low earnings. Recall that these were the years when black men's relative earnings showed major gains. (3) There has been a trend towards increased receipt of transfers by men of both races with disability and retirement transfers accounting for most of the increase. (4) Among male transfer recipients (of both races) who have stopped working, most persons did not exhibit usually low earnings in earlier years while they were working. (5) Less than 20 percent of the observed convergence in black men's relative (median) earnings since 1964 can be attributed to labor-force dropout behavior. The rest of the gain represents real improvements that have occurred in these years. This final finding is qualitatively similar to results obtained by Brown (1984) but based on a different methodology for assigning earnings to the labor-force dropouts.

From the preceding it is clear that factors besides supply explanations (the schooling model and the sample selection hypothesis) are important in the full explanation of the time path of black men's relative earnings.

Demand Theories

Demand-oriented explanations of low earnings among black men focus on the effect of the business cycle, discrimination, and crowding in the labor market. The theories of Bergmann (1971), Thurow (1969), and Doeringer and Piore (1971) all describe how the functioning of labor demand serves to initially place and then to maintain black men in low status, unstable, and cyclically sensitive jobs. Although the exact labor market processes depicted in the crowding theory, the queue theory, and dual labor market theory are quite different, all three conclude that black men suffer labor market disadvantages in comparison to white men. Specific disadvantages include unequal access to stable and high-paying jobs, lower rates of career earnings growth, higher job turnover rates, and greater frictional and cyclical unemployment.

Several time series studies have shown a significant effect of the business cycle on relative earnings. Papers by Brown (1984), Freeman (1973, 1981), Masters (1975), Rasmussen (1970), and Vroman (1974) all show that relative earnings rise in periods when output expands and unemployment falls. Cyclical swings in economic activity cause large-scale adjustments in the labor market. Arthur Okun (1973, pp. 218-228) has noted that the most cyclical industries, for example, durable manufacturing, pay high wages and employ primarily men aged 25 and older, the demographic group with the most stable pattern of labor-force attachment. Thus, when output and employment expand, workers are recruited from other industries and from the demographic groups that usually have lower earnings, that is, younger workers, blacks, and women.

Okun (1973) and Thurow (1969) have further argued that continuous operation of the economy at full employment yields additional income gains

to workers in lower paying industries and occupations. According to this argument the "high-pressure economy" is characterized by continuing employer recruitment needs and opportunities for upward mobility which redound disproportionately to young, black, and female workers. Should the economy move away from full employment, recruitment and upgrading opportunities diminish, and the associated income losses are borne most heavily by these same groups. The demand theories provide explanations for the observed cyclical sensitivity of black men's relative earnings.

Demand-oriented theories of black men's low relative earnings suggest that policies to increase labor demand will help to close the racial earnings gap. Gains will be realized by implementing macro policies that move the economy closer to full employment, and continuing gains may be realized by the operation of a "high-pressure economy." Effective policies that reduce employment discrimination against black men would also increase the demand for their services and raise their relative earnings. It is interesting to note that large earnings gains were realized by black men in the late 1960s when the economy remained continuously at full employment for four years (1966 to 1969) and active anti-discrimination policies were implemented by the federal government. (Recall Figure B in Section I.) In studies based on micro data from employers, Leonard (1986b) has found a positive effect of affirmative action on black men's employment. Others, e.g. Smith and Welch (1986), discount the effectiveness of affirmative action.

From the preceding review of the general economics literature it is obvious that a consensus has not been achieved on the relative importance of supply versus demand factors in contributing to the gap between black and white men's earnings. There is also sharp disagreement as to the contribution of anti-discrimination policies in closing the earnings gap. In addition to supply and demand explanations there is an explanation for racial earnings disparities that emphasizes the geographic mismatch between workers and jobs within urban labor markets. This literature can be viewed as combining supply with demand considerations to explain the low relative earnings of black workers.

Spatial Mismatch Theories

The spatial mismatch hypothesis is founded on two stylized facts that characterize the economies of large metropolitan areas (MSAs). (1) The black population is much more heavily concentrated in the inner city areas of MSAs, particularly MSAs outside of the South, than is the white population. (2) Employment growth has been much more rapid in suburban areas than in the central cities of the large MSAs. It is then argued that movement of jobs out of central city areas poses problems for blacks because housing market discrimination prevents them from following the jobs to the suburbs. The resulting spatial mismatch which grows with the passage of time underlies the poor economic performance (low earnings, high unemployment and declining labor force participation) of blacks in large urban areas.

The original exposition and testing of the spatial mismatch hypothesis is usually attributed to Kain (1968). His testing was based on 1950s commuting data from the Chicago and Detroit metropolitan areas. He

found that black shares of total employment across, small geographic areas (workplace zones) were significantly higher in black neighborhoods and neighborhoods close to the major urban ghetto. Kain's conclusion was that residential segregation by race leads to racial employment segregation. Thus, housing discrimination contributes to poor labor market outcomes and must be considered along with employment discrimination as a cause of low earnings and high unemployment among black workers.

The spatial mismatch hypothesis was controversial when originally proposed and was subjected to several criticisms. (See Part II of Leonard (1986a).) Recently it has experienced a revival in the writings of Kasarda (1984, 1987) and Wilson (1986, 1987). The perspectives and the lines of argument of the more recent authors depart in important ways from Kain's original writing. Kasarda emphasizes the transformation of central city economic activity from a manufacturing base to the provision of services and information processing. The newer jobs have educational requirements much higher than the requirements of the traditional manufacturing jobs that are disappearing. Kasarda (1987) also argues that entry level jobs (so important to teenagers) are being created mainly in the suburbs, not in the central cities, and that problems of spatial mismatch are more severe in the North East and Midwest than in the South and West. Wilson stresses differential geographic mobility within the black community with higher income and more educated blacks leaving the traditional black residential areas. As these inner-city areas become increasingly ghettoized, employment opportunities for the remaining residents (especially males) decline, partly due to their increasing social isolation and the absence of successful role models. These authors share with Kain the perception that

black economic performance would be significantly enhanced if central city areas could retain their traditional manufacturing employment base.

Despite the fact that the spatial mismatch hypothesis is two decades old and has been subjected to several empirical tests, it remains a controversial hypothesis and a fruitful one for additional research. The inability of previous research to clearly reject or confirm the hypothesis should not be surprising because it is not a simple hypothesis. An adequate test would require a data base containing several crucial dimensions of information. The data requirements for testing the mismatch hypothesis will be noted in the last section of the paper.

Although it is presently a hypothesis in need of further exploration, three findings linked to the spatial mismatch hypothesis appear to be firmly established by previous research. First, black employment shares in small geographic areas within metropolitan areas, e.g. census tracts, decline as such areas are located further from black population centers (Kain (1968), Leonard (1986)). Additionally, longitudinal studies of integrated plants that move from the central city to the suburbs have found that proportionately fewer black workers than white workers remain employed at such plants after relocation (Kain and Zax (1983)). These findings are broadly consistent with the mismatch hypothesis.

Second, although black workers spend more time commuting than white workers, the differences by race are modest. Leonard (1985, p. 23) reports that in 1980 average (one way) commuting averaged 36 minutes for blacks in Chicago, (or 8 minutes longer than the all worker average) and 28 minutes in Los Angeles (or 4 minutes longer than the all worker average). On a daily basis the "excess" commuting time of black workers averaged 16

minutes in Chicago and 8 minutes in Los Angeles. What needs further analysis regarding the issue of commuting time is the economic return to commuting. If the wage rate of the jobs being created in the suburbs is not higher than for nearly jobs, a benefit-cost calculus would suggest that economic return to longer comments would not justify the extra costs incurred in longer commutes. Pervious research is largely silent on this issue.

Third, labor market outcomes (unemployment rates and employment-to-population ratios) for blacks residing in neighborhoods located close to major urban job centers are nearly identical to the outcomes for blacks in neighborhoods located far from job centers. The latter two findings, based on data for Chicago in 1970 and Chicago and Los Angeles in 1980, are reported in papers by Ellwood (1986) and Leonard (1985, 1986a). Both seem to call into question the validity of the mismatch hypothesis. As Ellwood has stated, the problem may be race, not space.

Although more research on the spatial mismatch hypothesis is needed, the preceding findings call into question its explanatory power. A second cautionary note is provided by considerations of regional economic developments as illustrated by the analysis of MSA unemployment rates in Section II and the employment trends discussed in Section I\II. The spatial mismatch hypothesis contemplates the movement of jobs from the central city to the suburbs. Other possible destinations for job moves (particularly for manufacturing jobs) include rural areas in the state (so called greenfields), other geographic regions of the U.S. and abroad. The latter moves probably have been as characteristic as moves to the suburbs, particularly for northeastern cities in the 1970s and midwestern cities in

the 1980s. To the extent that the geographic division or region defines the relevant extent of the labor market, the spatial mismatch hypothesis takes on broader geographic dimensions than have been contemplated to date. For purposes of improving the labor market prospects of black workers in Chicago, ending discriminatory housing practices in the Chicago suburbs may shrink in importance relative to providing tax incentives and relocation allowances for workers to move to Boston, Phoenix or whatever urban labor markets have the best job openings. A regional (or other macro) perspective provides a useful complement to the urban labor market prospective which underlies the spatial mismatch hypothesis.

The literature reviewed in this section is not conclusive in explaining the labor market performance of blacks. There are fundamental disagreements among researchers in the importance of supply versus demand factors in causing disparate labor market outcomes. There is also disagreement on the importance of spatial mismatches in contributing to low earnings and high unemployment among urban black workers. To date, it has been much easier to pose empirical tests that reject elements of the main theories than to pose tests that provide positive support for the theories.

V. DIRECTIONS FOR ADDITIONAL RESEARCH

At least four areas for additional research are suggested based on the summary data examined in Section I, the preliminary analysis of metropolitan unemployment rates of Section II, the employment trends of Section III and the literature review of Section IV. First, it was suggested in Section II that regional economic developments (as reflected in divisional unemployment rates) exert a strong influence on MSA unemployment rates. Since it was also found in Section II that nonwhite unemployment rates are closely tied to white unemployment rates within MSAs, it would seem that black economic performance within regions (and divisions) is closely tied to overall regional economic performance. The link between regional economic developments and the economic performance of blacks within regions would seem to be a fruitful area for further research.

Second, more analysis of the spatial mismatch hypothesis is needed. Much of the existing literature is based on analysis of a few cities (e.g. Chicago, Detroit and Los Angeles). Selecting analytic samples that includes MSAs in rapidly growing urban areas as well as older urban areas would seem to be called for.

It should be noted that previous research on the spatial mismatch hypothesis has not been conclusive because the hypothesis has complicated data requirements. Seven important data items needed to test the hypothesis (including the extensions on the basic hypothesis made by Kasarda and Wilson) are as follows: (1) information on the geographic distribution of jobs within the MSA; (2) information on the skill requirements of the jobs at different locations; (3) information on the

geographic distribution of workers within the MSA; (4) information on the human capital characteristics (years of schooling, school quality, work experience) of workers at different locations; (5) information on the ease of commuting (distances, modes, speeds and costs); (6) information on the degree of housing discrimination and (7) information on the degree of employment discrimination. All seven items in the preceding list could contribute to worse labor market outcomes for blacks in a given urban area. Note that public policy to end discrimination in employment and housing could make a positive contribution, but to be effective the policymaker would need to know which of the other factors in the preceding list was most important in contributing to the disparities in labor market outcomes.

Third, the spatial mismatch hypothesis has elements that call for longitudinal analysis. In addition to examining the experiences of workers in plants that move from the inner city to the suburbs, e.g. Kain and Zax (1983), two other types of longitudinal analyses can be suggested. What happens to workers in inner city plants that close? Where do establishments that open in suburban areas recruit their workers from? Both analyses could be conducted with an eye to verifying the implied predictions of the spatial mismatch hypothesis.

Finally, Section I indentified a decline in the relative earnings of Hispanic men, Hispanic women and black women in 1985 and 1986. An analysis of the causes for these recent developments should be undertaken.

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